## Relocation of primary types of butterflies (Papilionoidea) described by S. K. Korb in the Y. B. Kosarev collection

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**Abstract.** The primary types of *Paralasa alajense* Korb, 2004, *Paralasa jordana tolkieni* Korb, 2009 (Nymphalidae: Satyrinae), *Athamanthia alexandra melkor* Korb, 2003, *Maculinea alcon aulendil* Korb, 2009, *Albulina tshatkala* Korb, 1997, *Agrodiaetus ishkashimicus alajanus* Korb, 1997 and *Polyommatus kirgisorum gorthaur* Korb, 2009 (Lycaenidae) are transferred from the private collection of Y. B. Kosarev to the Zoological Museum of Moscow University. Illustrations of these types are provided.

On August 13<sup>th</sup>, 2008 one of the well-known Russian amateur entomologists, Yuri Kosarev, passed away. I had known him for 20 years and during that time maintained an active and very good relationship with him. Some of my descriptions of new butterfly taxa were based on his material and so the primary types were included in his private collection. Currently access to the collection of Y. Kosarev is limited, and so all primary types present have been transferred to the Zoological Museum of Moscow State University (ZMMU). I am sincerely grateful to O. Kosarev, the son of Y. Kosarev, for the opportunity of retrieving these type specimens, as well as for their transfer to ZMMU.

## List of the primary types from the Y. Kosarev collection relocated to the ZMMU

- Paralasa alajense Korb, 2004 (Figs 1−3). Korb, 2004: 116, fig. 2. Holotype ♂, '24.07.1991 Kirgizia | Oschskaya Oblast | Alaikuu | leg. G. A. Anufriev', 'HOLOTYPUS ♂ | Paralasa | alajense sp.n.' | S. Korb design.'
- Paralasa jordana tolkieni Korb, 2009 (Figs 4–6). Korb, 2009a: 146–148. Holotype ♂, '19.07.1992 Kirghizia | Transalai Mts. | Aram-Kungei | leg. S. P. Nichik', 'HOLOTYPUS ♂ | Paralasa | jordana | tolkieni ssp.n. | S. Korb design.'
- *Maculinea alcon aulendil* Korb, 2009 (Figs 7–9). Korb, 2009b: 133–134. Holotype ♂, `4.–9.07.1992 Russia | Buryatia, Khamar-Daban | Irkut river 1500 m | leg. E. Prokofieva', 'HOLOTYPUS ♂ | *Maculinea* | *alcon* | aulendil ssp.n. | S. Korb design.'
- Polyommatus kirgisorum gorthaur Korb, 2009 (Figs 10−12). Korb, 2009c: 215−216. Holotype ♂, 'A. juldusa kirgirosum [sic!] ♂ | Киргизия Юж.[ный] б.[ерег] оз.[ера] Иссык- | Куль. 10 км вос. [точнее] г. Каджи-Сай. | h = 1670 m. 22.07.[20]00. Ануфриев' [Kirghizia, southern coast of Issyk-Kul lake, 10 km E of Kadzhi-Say, 1670 m, 22.07.2000, leg. G. A. Anufriev] (Y. Kosarev's handwriting), 'HOLOTYPUS ♂ | Polyommatus | kirgizorum | gorthaur ssp.n. | S. Korb design.'
- Athamanthia alexandra melkor Korb, 2003 (Figs 13–15). Korb, 2003: 47. Holotype ♂, 'Киргизия. Чаткальская | дол.[ина] р.[ека] Чандалаш 6 км | выше устья. 20.06.[19]99 | h = 1630 m. Anufriev' [Kirghizia, Chatkalskaya valley, Chandalash River 6 km upstream from the mouth, 1630 m, 20.06. 1999, leg. G. A. Anufriev] (Y. Kosarev's handwriting), 'HOLOTYPUS ♂ | Athamanthia alexandra | melkor ssp.n. | S. K. Korb design. 2001'



Figs 1-21. Primary types of butterflies described by Korb relocated from the Kosarev collection to the ZMMU. 1. Paralasa alajense Korb, 2004. Holotype male, upperside. 2. Paralasa alajense Korb, 2004. Holotype male, underside. 3. Paralasa alajense Korb, 2004. Holotype male, labels. 4. Paralasa jordana tolkieni Korb, 2009. Holotype male, upperside. 5. Paralasa jordana tolkieni Korb, 2009. Holotype male, underside. 6. Paralasa jordana tolkieni Korb, 2009. Holotype male, labels. 7. Maculinea alcon aulendil Korb, 2009. Holotype male, upperside. 8. Maculinea alcon aulendil Korb, 2009. Holotype male, underside. 9. Maculinea alcon aulendil Korb, 2009. Holotype male, labels. 10. Polyommatus kirgisorum gorthaur Korb, 2009. Holotype male, upperside. 11. Polyommatus kirgisorum gorthaur Korb, 2009. Holotype male, underside. 12. Polyommatus kirgisorum gorthaur Korb, 2009. Holotype male, labels. 13. Athamanthia alexandra melkor Korb, 2003. Holotype male, upperside. 14. Athamanthia alexandra melkor Korb, 2003. Holotype male, underside. 15. Athamanthia alexandra melkor Korb, 2003. Holotype male, labels. 16. Albulina (Pamiria) tshatkala Korb, 1997. Holotype male, upperside. 17. Albulina (Pamiria) tshatkala Korb, 1997. Holotype male, underside. 18. Albulina (Pamiria) tshatkala Korb, 1997. Holotype male, labels. 19. Agrodiaetus ishkashimicus alajanus Korb, 1997. Holotype male, upperside. 20. Agrodiaetus ishkashimicus alajanus Korb, 1997. Holotype male, underside. 21. Agrodiaetus ishkashimicus alajanus Korb, 1997. Holotype male, labels.

- Albulina (Pamiria) tshatkala Korb, 1997 (Figs 16–18). Korb, 1997: 436, fig. 3. Holotype ♂ (genitalia lost), '10.05.1990 Uzbekistan | Chatkalskaya valley | Kumbel, Beldersay valley | leg. G. A. Anufriev', 'HOLOTYPUS ♂ | Albulina tshatkala sp.n. | S. K. Korb design. 1996'
- Agrodiaetus ishkashimicus alajanus Korb, 1997 (Figs 19–21). Korb, 1997: 434–436, figs 1, 2. Holotype &, '24.07.1991 Kirghizia | Alayski Mts. | Alaikuu | leg. G. A. Anufriev', '24.07.[19]91 | п. Алайку' [24.07.1991, Alaikuu] (Y. Kosarev's handwriting), 'HOLOTYPUS & | Polyommatus ishkashimicus | alajanus Korb, ssp.n. | S. K. Korb design. 1996'.

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